

FORM PTO-1449		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. 2026-4116US2	SERIAL NO. To Be Assigned
INFORMATION DISCLOSURE CITATION <i>(Use several sheets if necessary)</i>		APPLICANT(S) Bukh, et al.			
		FILING DATE May 26, 1998		GROUP ART UNIT To Be Assigned	

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>Q</i>		5,427,909	6/27/95	Okamoto et al.			
<i>Q</i>		5,372,928	12/13/94	Miyamura et al.			
<i>Q</i>		5,350,671	9/27/94	Houghton et al.			

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
<i>Q</i>	JP 05 068562 A	3/23/93	Japan				<i>X</i>
<i>Q</i>	WO 94 01778	1/20/94	<i>PCT</i>				
<i>Q</i>	WO 92 19743	11/12/92	<i>PCT</i>				
<i>Q</i>	WO 92 21759	12/92	<i>PCT</i>				

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Papers, Etc.)

<i>Q</i>		Seo-Hee Cho et al.: "Genomic typing of hepatitis C viruses from Korean patients: implications of genome variation in the E2/NS1 region." BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, vol. 196, no. 2, 29 October 1993, pages 780-788	<i>✓</i>
<i>Q</i>		H.M. Müller et al.: "Genetic variability of German hepatitis C virus isolates" JOURNAL OF MEDICAL VIROLOGY, vol. 40, 1993, pages 291-306	
<i>Q</i>		J.H. Han et al.: "Characterization of the terminal regions of hepatitis C viral RNA: Identification of conserved sequences in the 5'-untranslated region and poly(A) tails at the 3' end." PROC. NATL. ACAD. SCI. USA, vol. 88, no. 5, 1 March 1991, pages 1711-1715	
<i>Q</i>		H. Okamoto et al.: "Characterization of the genomic sequences of type V (or 3a) hepatitis C virus isolates and PCR primers for specific detection" JOURNAL OF GENERAL VIROLOGY, vol. 74, 1993, pages 2385-2390	
<i>Q</i>		A. Machida et al.: "Two distinct subtypes of Hepatitis C virus defined by antibodies directed to the putative core protein." HEPATOLOGY, vol. 16, no. 4, October 1992, pages 886-891	

EXAMINER

*Dr. Alvin J. S. M.*

DATE CONSIDERED

*2/6/01 9/13/04*

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449		U.S. DEPARTMENT OF COMMERCE		ATTY. DOCKET NO.	SERIAL NO.
		PATENT AND TRADEMARK OFFICE		2026-4116US2	To Be Assigned
<b>INFORMATION DISCLOSURE CITATION</b>				APPLICANT(S)	
<i>(Use several sheets if necessary)</i>				Bukh, et al.	
				FILING DATE	GROUP ART UNIT
				May 26, 1998	To Be Assigned

**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

**FOREIGN PATENT DOCUMENTS**

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
32		EP 0 586 065	3/9/94	European				
32		WO 95 01442	1/12/95	PCT				
32		WO 94 25601	11/10/94	PCT				
32		WO 94 27153	11/24/94	PCT				

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Papers, Etc.)**

32		Simmonds P. et al., "Identification of genotypes of hepatitis C virus by sequence comparisons in the core, E1 and NS-5 regions," <u>Journal of General Virology</u> , 5:1053-1061 (1994)
32		Kao, J.H. et al., "Detection of divergent hepatitis C virus envelope sequences," <u>Journal of Biomedical Science</u> , 3:158-162 (1994)
32		Roggendorf, M. et al., "Variability of the envelope regions of HCV in European isolates and its significance as a diagnostic tool," <u>Archives of Virology Supplementum</u> , 7:27-39 (1993)
32		Li, Ji-Su et al., "Identification of the third major genotype of hepatitis C virus in France", <u>Biochem. Biophys. Res. Commun.</u> , 1474-81 (1994)

EXAMINER	DATE CONSIDERED
<i>32</i>	<i>5-13-04</i>

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449		U.S. DEPARTMENT OF COMMERCE	ATTY. DOCKET NO.	SERIAL NO.
		PATENT AND TRADEMARK OFFICE	2026-4116US2	To Be Assigned
INFORMATION DISCLOSURE CITATION  (Use several sheets if necessary)		APPLICANT(S)		
		Bukh, et al.		
		FILING DATE	GROUP ART UNIT	
May 26, 1998	To Be Assigned			

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
32		GB 221 251 1B	1/22/92	United Kingdom				

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Papers, Etc.)

32	Choo, O.L. et al. (1989) <u>Science</u> , 244:359-362
32	Weiner, A. J. et al. (1990) <u>Lancet</u> , 335:1-3
32	Kuo, G. et al. (1992) <u>Science</u> , 244:362-364
32	Okamoto, H. et al. (1992) <u>J. Gen. Virol.</u> , 73:673-679
32	Bukh, J. et al. (1992) <u>Proc. Natl. Acad. Sci. U.S.A.</u> , 89:187-191
32	Bukh, J. et al. (1992) <u>Proc. Natl. Acad. Sci. U.S.A.</u> , 89:4942-4946
32	Cha, T. et al. (1992) <u>Proc. Natl. Acad. Sci. U.S.A.</u> , 89:7144-148

EXAMINER	DATE CONSIDERED
<i>Yann Z</i>	5-13-04

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. 2026-4116US2	SERIAL NO. To Be Assigned
INFORMATION DISCLOSURE CITATION  (Use several sheets if necessary)		APPLICANT(S) Bukh, et al.		
		FILING DATE May 26, 1998	GROUP ART UNIT To Be Assigned	

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
							YES

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Papers, Etc.)

32		Chan S-W. et al. (1992) <u>J. Gen. Virol.</u> , 73:1131-1141
32		Lee, C-H. et al. (1992) <u>J. Clin. Microbiol.</u> , 30:1602-1604
32		Choo, et al. (1991) <u>Proc. Natl. Acad. Sci. U.S.A.</u> , 88:2451-2455
32		Okamoto, et al. (1992) <u>Virology</u> , 188:331-341
32		Inchauspe, et al. (1991) <u>Proc. Natl. Acad. Sci. USA</u> , 88:10292-10296
32		Takamizawa, A. et al. (1991) <u>J. Virol.</u> , 65:1105-1113

EXAMINER	DATE CONSIDERED
<i>Yuan</i>	5-13-04

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449		U.S. DEPARTMENT OF COMMERCE	ATTY. DOCKET NO.	SERIAL NO.
		PATENT AND TRADEMARK OFFICE	2026-4116US2	To Be Assigned
INFORMATION DISCLOSURE CITATION  (Use several sheets if necessary)		APPLICANT(S)		
		Bukh, et al.		
		FILING DATE	GROUP ART UNIT	
		May 26, 1998	To Be Assigned	

**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

**FOREIGN PATENT DOCUMENTS**

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Papers, Etc.)**

52		Kato, N. et al. (1990) <u>Proc. Natl. Acad. Sci. U.S.A.</u> , 87:9524-9528
32		Okamoto, H. et al. (1992) <u>Virology</u> , 190:894-899
32		Ogata, N. et al. (1991) <u>Proc. Natl. Acad. Sci. U.S.A.</u> , 88:3392-3396
32		Mori, S. et al. (1992) <u>Biochem. Biophys. Res. Comm.</u> , 183:334-342
32		Weiner, A.J. et al. (1991) <u>Virology</u> , 180:842-848
32		Hijikata, M. et al. (1991) <u>Biochem. Biophys. Res. Comm.</u> , 175:220-228

EXAMINER	DATE CONSIDERED
<i>James</i>	5-19-04

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449		U.S. DEPARTMENT OF COMMERCE	ATTY. DOCKET NO.	SERIAL NO.
		PATENT AND TRADEMARK OFFICE	2026-4116US2	To Be Assigned
INFORMATION DISCLOSURE CITATION  (Use several sheets if necessary)		APPLICANT(S)		
		Bukh, et al.		
		FILING DATE	GROUP ART UNIT	
		May 26, 1998	To Be Assigned	

**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

**FOREIGN PATENT DOCUMENTS**

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Papers, Etc.)**

32	Okamoto, H. et al. (1990) <u>Japan. J. Exp. Med.</u> , 60:167-177	✓
32	Takeuchi, K. et al. (1990) <u>J. Gen. Virol.</u> , 71:3027-3033	
32	Chen P. J. et al. (1992) <u>Virology</u> , 188:102-113	
32	Liu, K. et al. (1992) <u>Gene</u> , 114:245-250	
32	Tanaka, T. et al. (1992) <u>Virus Research</u> , 23:39-53	
32	Abe, K. et al. (1992) <u>J. Gen. Virol.</u> , 73, 2725-2729	

EXAMINER	DATE CONSIDERED
<i>32</i>	<i>5-13-04</i>

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449		U.S. DEPARTMENT OF COMMERCE	ATTY. DOCKET NO.	SERIAL NO.
		PATENT AND TRADEMARK OFFICE	2026-4116US2	To Be Assigned
INFORMATION DISCLOSURE CITATION  (Use several sheets if necessary)		APPLICANT(S)		
		Bukh, et al.		
		FILING DATE	GROUP ART UNIT	
May 26, 1998	To Be Assigned			

**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

**FOREIGN PATENT DOCUMENTS**

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Papers, Etc.)**

32		Honda, M. et al. (1993) <u>Arch. Virol.</u> , 128, 163-169
32		Stuyver, L. et al. (1993) <u>Biochem, Biophys. Res. Comm.</u> , 192:635-641
32		Okamoto, H. et al. (1994) <u>J. Gen. Virol.</u> , 75:629-635
32		Bukh, J. et al. (1993) <u>PNAS</u> , 90:8234-8238
32		Li, J., et al. (1991) <u>Gene</u> , 105:167-172
32		Houghton, M. (1991) <u>Hepatology</u> , 14:381-388

EXAMINER

*32*

DATE CONSIDERED

*5-13-04*

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449		U.S. DEPARTMENT OF COMMERCE	ATTY. DOCKET NO.	SERIAL NO.
		PATENT AND TRADEMARK OFFICE	2026-4116US2	To Be Assigned
<b>INFORMATION DISCLOSURE CITATION</b>  <i>(Use several sheets if necessary)</i>		APPLICANT(S)		
		Bukh, et al.		
		FILING DATE	GROUP ART UNIT	
		May 26, 1998	To Be Assigned	

**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

**FOREIGN PATENT DOCUMENTS**

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Papers, Etc.)**

<i>320</i>	Machida, A. et al. (1992) <u>Hepatology</u> , 16:886-891
<i>320</i>	Okamoto, H. et al. (1993) <u>J. Gen. Virol.</u> , 74:2385-2390
<i>320</i>	Simmonds, P., et al. (1993) <u>J. Gen. Virol.</u> , 74:661-668
<i>320</i>	Stuyver, L. et al. (1993) <u>J. Gen. Virol.</u> , 74:1093-1102
<i>320</i>	Widell, A. et al. (1994) <u>J. Med. Virol.</u> , 44:272-279
<i>320</i>	Qu D. et al. (1994) <u>J. Gen. Virol.</u> , 75:1063-1070

**EXAMINER****DATE CONSIDERED***5-13-04*

**EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449		U.S. DEPARTMENT OF COMMERCE		ATTY. DOCKET NO.	SERIAL NO.	
		PATENT AND TRADEMARK OFFICE		2026-4116US2	To Be Assigned	
<b>INFORMATION DISCLOSURE CITATION</b>  <i>(Use several sheets if necessary)</i>		APPLICANT(S)				
		Bukh, et al.				
		FILING DATE		GROUP ART UNIT		
		May 26, 1998		To Be Assigned		

**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

**FOREIGN PATENT DOCUMENTS**

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Papers, Etc.)**

<i>32</i>		Simmonds, P. et al. (1994) <u>J. Gen. Virol.</u> , 75:1053-1061
<i>32</i>		Stuyver, L. et al. (1993) <u>J. Gen Virol.</u> , 74:1093-1102
<i>32</i>		Tokita, H., et al. (1994) <u>J. Gen. Virol.</u> , 75:931-936
<i>32</i>		Stuyver, L., et al. (1994) <u>PNAS</u> , 91:10134-10138
<i>32</i>		Vlazow, S., et al. (1994) <u>J. Virol Meth.</u> , 48:81-92
<i>32</i>		Simmonds, P., et al. (1993) <u>J. Clin. Microbiol.</u> , 31:1493-1503

**EXAMINER***32***DATE CONSIDERED***5-7-98*

**EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. 2026-4116US2	SERIAL NO. To Be Assigned
INFORMATION DISCLOSURE CITATION  (Use several sheets if necessary)		APPLICANT(S) Bukh, et al.		
		FILING DATE May 26, 1998	GROUP ART UNIT To Be Assigned	

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
							YES      NO

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Papers, Etc.)

*3201*      Hayashi, N., et al. (1993) J. Hepatol., 17 (suppl 3) S94-S107

*3202*      Wang, Y., et al. (1993) J. Med. Viro., 40:254-260

*3203*      Tanaka, T., et al. (1994) Hepatology, 19:1347-1353

*3204*      Sakamoto, M., et al. (1994) J. Gen. Virol., 75:1761-1768

EXAMINER 	DATE CONSIDERED <i>2/6/01 5-15-04</i>
--	--

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.